DIRECT DRIVE
STEREO TURNTABLE

PL-71

OPERATING INSTRUCTIONS

FVT

PIONEER

Thank you very much for your purchase of Pioneer model PL-71. You will get many years of pleasure from this top-quality stereo turntable.
To get the most from this feature-packed turntable, please read the operating instructions and follow the directions indicated.
For the psychological benefit of those who still want to use their optional phono cartridges, no phono cartridge is equipped with this turntable. The first thing you have to do is to attach your option to a head shell referring to the directions indicated in the instructions.

FEATURES

DIRECT DRIVE SYSTEM

No belt or idlers. The DC servo motor drives the platter directly, resulting in lowest possible vibrations transmitted to the tonearm. The result is a new height of turntable performance plenty for the most demanding audio enthusiast.

ELECTRONIC SERVO CONTROL

Turntable revolution speed is affected by many factors, including ambient room temperature, etc., which cannot be predicted or corrected by motor performance alone. This electronic circuit comes into play at the touch of a button, letting you adjust the speed ±2% during either 33-1/3 or 45 rpm play.

PRECISION TRACKING, SENSITIVE ANTI-SKATING SYSTEM

Playing 4-channel records requires extra tonearm precision, and the PL-71 delivers. Not only with an exactly-balanced tonearm design, but also with an ideal anti-skating system. The result is stable tracking over every part of the record for brilliant response from the first note to the last.

CONVENIENT AUXILIARY FEATURES

The tonearm is raised and lowered by ARM ELEVATOR, saving both stylus and record wear.
The stylus overhang can be adjusted precisely with the overhang gauge.
The semitransparent dust cover is held by spring-loaded hinges and can be arrested in any desired position. If desired, it can be removed altogether.

EYE-APPEAL DESIGN

The cabinet is set off the natural beauty of selected walnut, with a smart black base plate.
All controls are grouped on the right for easy one-hand operation.

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INSTALLATION

Install the PL-71 with the following points in mind.

- The place must be well-ventilated and free from humidity and dust.
- The unit should not be exposed to direct sunlight.
- The unit should be placed on horizontal situation.
- The unit should be placed as far from the speaker systems as possible.

STEREO SYSTEM SETUP

The PL-71 is a first-quality stereo turntable and can provide its full performance only when combined with other components of equal quality, so you should select other quality components comparable to this turntable. Set up the system as shown in Figs. 1 or 2.

A WORD ABOUT COMPONENTS

Be sure to select the rest of your system with an eye to achieving sufficient performance and response so that you can make the most of your PL-71.
A wise choice would be the Pioneer components designed and manufactured to provide these very characteristics.

The Amplifier

There are many types available: Integrated stereo amplifiers, AM/FM stereo receiver, stereo preamplifiers and stereo power amplifiers.
You can take your choice of systems, making sure the one you choose will blend well with the speakers you select. Look for high performance and stability in an amplifier.

The Speakers

Here there are also many possibilities. You have a choice or bass-reflex type or fully-enclosed type cabinets, full-range, 2-way, 3-way and other types of speaker component combinations, and bookshelf, floor type or omnidirectional, etc. styling. With all these choices, your main guide should be how well speakers sound with the rest of your system.

The Phono Cartridge

There are magnetic (moving coil, moving magnet and induced magnet types) cartridge as well as semi-conductor types and optical types.
If you use a moving coil (MC) type cartridge with the PL-71, make sure your amplifier has the capability of accepting this type of input signal.

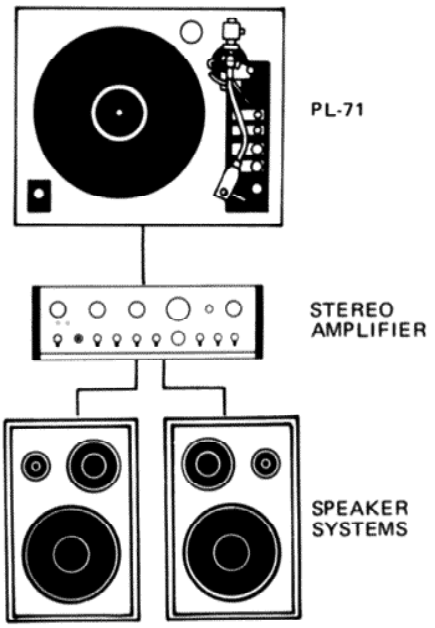


Fig. 1

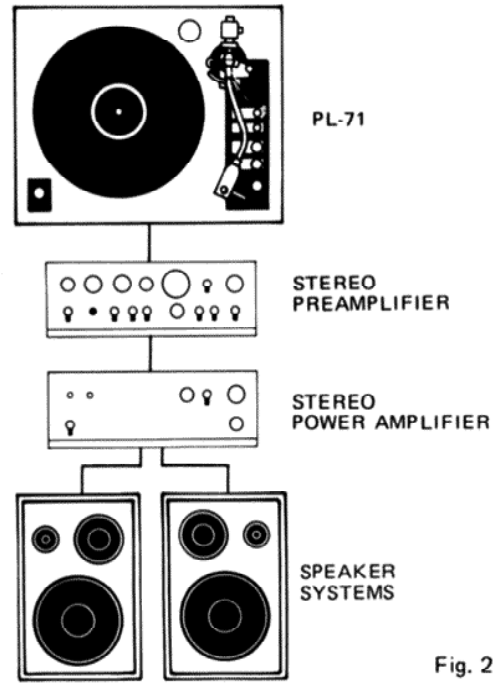


Fig. 2

ASSEMBLY

To avoid possible damage during transport, heavy parts (such as the platter) and delicate ones are packed separately from the main body. Assemble them into one unit as shown in the illustrations.

REMOVE THE TONEARM PACKING

Gently remove the tonearm packing as shown in Fig. 3.

PLATTER INSTALLATION

Remove the platter from its separate package and slip it onto the center shaft.
Then place the rubber mat on the turntable platter.

CARTRIDGE MOUNTING

The color-coded pin connectors in the head shell conform to the international EIA standard. Attach the cartridge according to the drawing (Fig. 4).
After connection of pin connectors, plug the head shell into the tonearm and tighten firmly locking collar (Fig. 5).

OVERHANG ADJUSTMENT

After mounting the cartridge, you must adjust overhang length.
At first, set the 45 rpm record adaptor provided with overhang gauge onto the center shaft.
Bring the head shell to the point of the overhang gauge and regulate stylus tip to 14.5 mm index line explained in Figs. 6 and 7.
When overhang adjustment is over, tighten the cartridge-held screws.

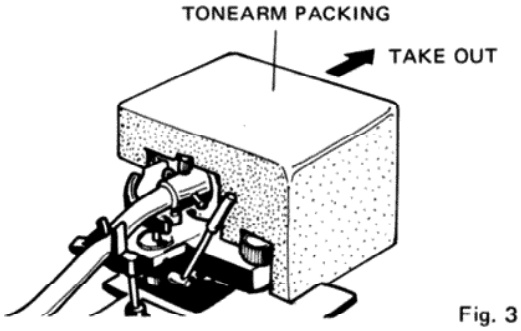
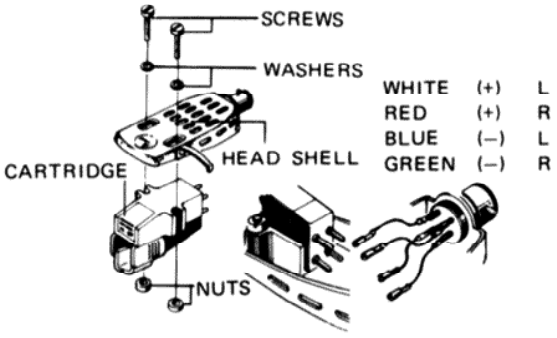


Fig. 3



This illustrates use of Pioneer cartridge PC-50.

Fig. 4

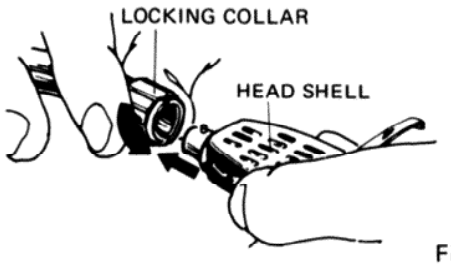


Fig. 5

HOW TO ADJUST OVERHANG

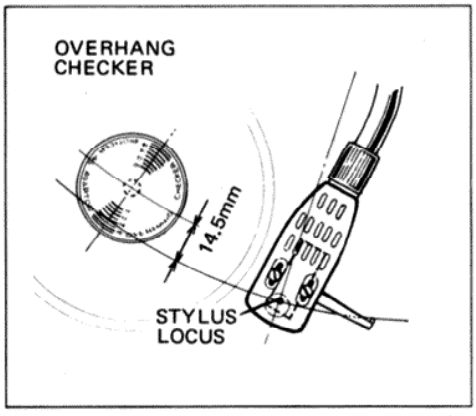
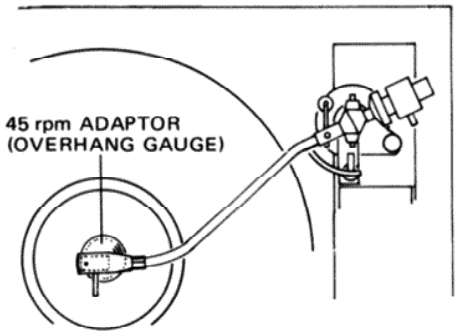


Fig. 7



Adjust cartridge so that the stylus comes right over this index line of 14.5 mm.

Fig. 6

COUNTERWEIGHT INSTALLATION

Counterweight consists weightsleeve and main weight. At first, the weightsleeve slips into the rear end of the tonearm (Fig. 8).
Once it is slipped on a bit the threads will engage. Screw on more turning in a clockwise direction a few times.
Next, the main weight slips into the rear end of the weightsleeve and tighten weight-fasten screw so the clearance cound be made 3 mm between main weight and weightsleeve (Fig. 9).

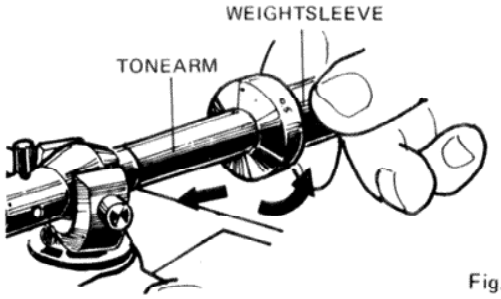


Fig. 8

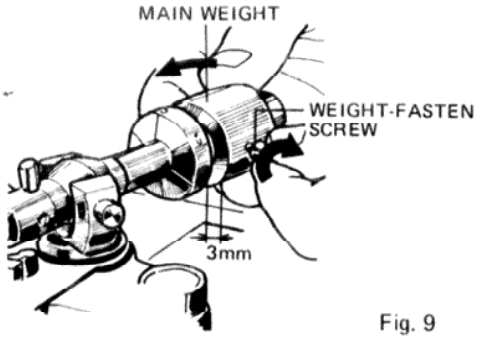


Fig. 9

LATERAL WEIGHT INSTALLATION

Install the lateral weight as follows:

1. Loosen the screw which holds the lateral crooked bar on the tonearm.
2. Slip the lateral weight stored in accessory box into the lateral crooked bar, then tighten the fitting screw of lateral weight (Fig. 10).
3. Tighten the lateral crooked bar-held screw so that the lateral crooked bar is kept vertically against the tonearm pipe.

NOTE:
The lower the lateral weight is installed, the lower the center of gravity becomes. The higher the lateral weight is installed, the higher the center of gravity becomes.
This is called "variable center-of-gravity type lateral balance."

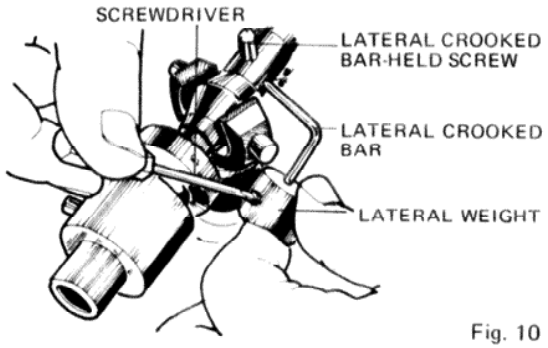


Fig. 10

THE HEIGHT OF THE ARM REST ADJUSTMENT

The height of the arm rest can be adjusted by untightening the fitting screw (Fig. 11).

ADJUSTMENT OF TONEARM HEIGHT

The height of the tonearm must be kept parallel with turntable platter.
This height can be regulated by untightening 2 clamp screws as shown in Fig. 12.

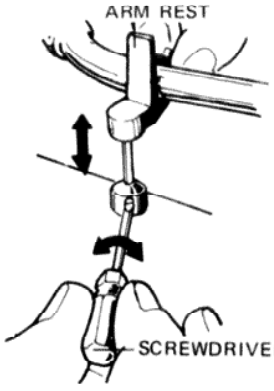


Fig. 11

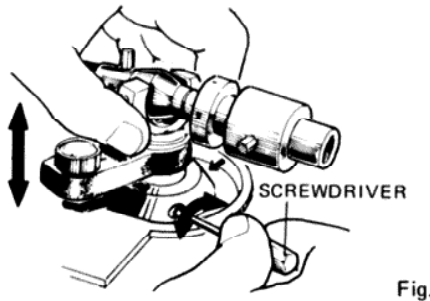


Fig. 12

ADJUSTMENTS

HORIZONTAL BALANCE ADJUSTMENT

1. Set the anti-skating force control knob to the "0."
2. Remove the stylus protection cover from the cartridge.
3. Free the tonearm from the arm rest.
4. Bring down the arm elevator.
5. Move the weight sleeve slowly back and forth (by turning it) until the tonearm floats in horizontal position.
6. Keeping the weight sleeve in this position, turn only the tracking force dial ring so that the zero aligns with the black index line on the tonearm. (Fig. 13).
7. After the horizontal balance is complete, return the tonearm to the arm rest and clamp it.

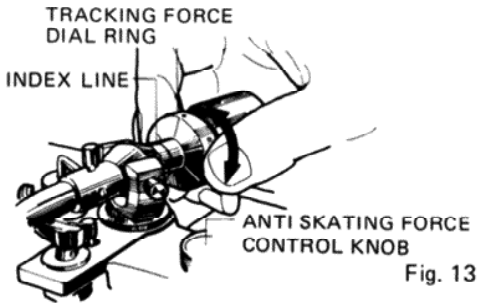
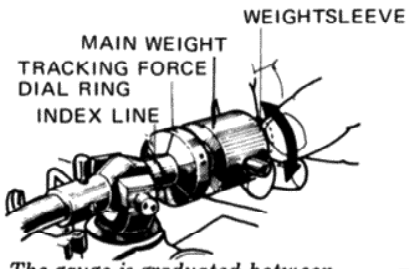


Fig. 13

TRACKING FORCE ADJUSTMENT

After the horizontal balance adjustment is complete, the tonearm is at zero tracking force. Turn the weight sleeve (the tracking force dial ring and main weight will turn with it) until the gauge reads the correct force for the cartridge (Fig. 14).



The gauge is graduated between 0.5 and 3.0 grams.

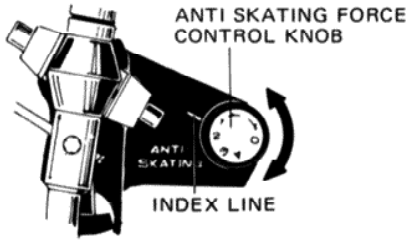
Fig. 14

ANTI-SKATING ADJUSTMENT

The anti-skating force control knob should be adjusted to the same setting as that required for the tracking force (Fig. 15).

What is "Anti-skating"?

A force is created by the record rotation which tends to pull the stylus (and tonearm) toward the center of record. The anti-skating device provides a precisely controlled counter force to cancel this tendency.



For example, if the tracking force of the cartridge is 2 grams, set the anti-skating force control knob to 2.

Fig. 15

LATERAL BALANCE ADJUSTMENT

Adjust the lateral bar length as shown in Fig. 16, so that the lateral bar length become from 20 to 24 mm.

NOTE:
After this adjustment once made, no readjustment is needed even if the supplied phono cartridge is replaced with your option.

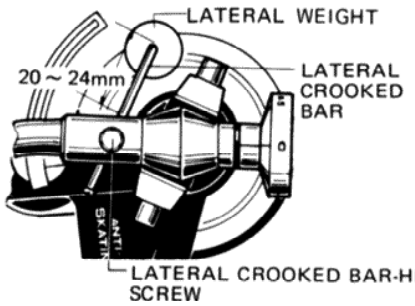


Fig. 16

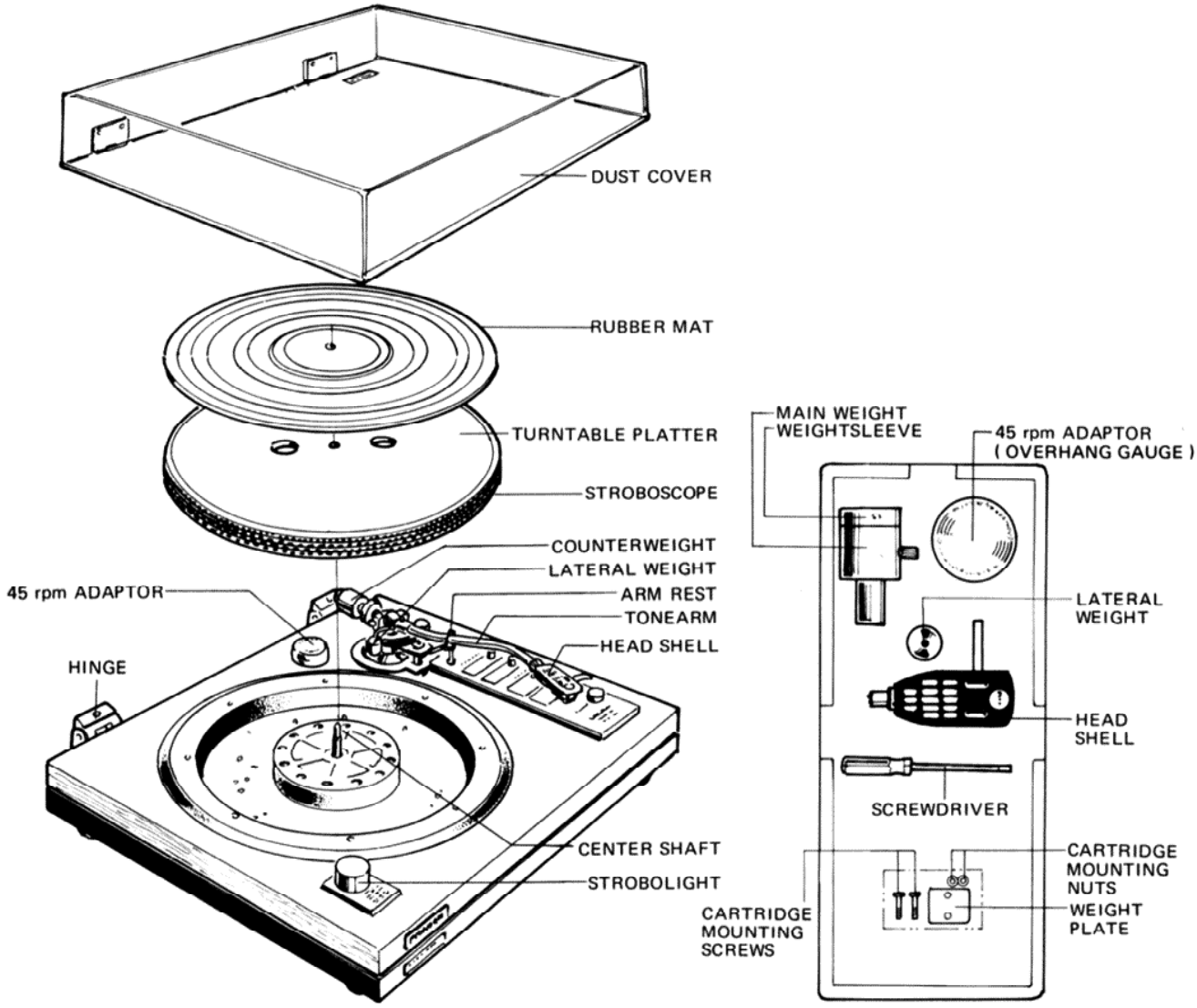
Installation of the Cartridge

It is possible for this tonearm to install a cartridge of which weight is 4 to 32 g by positioning the main weight on the weightsleeve. In using almost all the cartridge on the market, this tonearm will be adjusted by above-stated way.
But only when using extremely heavy or light cartridge, tonearm adjustment may be impossible.
In such a case, untighten the weight fasten screw, then, slide the main weight back and forth.

Corresponding relation of the cartridge weight and the clearance is shown as below:

Cartridge weight	Proper clearance
4 g to 10 g	0
20 g	3 mm
25 g	15 mm
32 g	20 mm

PARTS IDENTIFICATION



DUST COVER ATTACHMENT

Slip the hinges on the plastic dust cover into their counterparts on the cabinet. Be sure to press the two sets of hinges together firmly (Fig. 17).

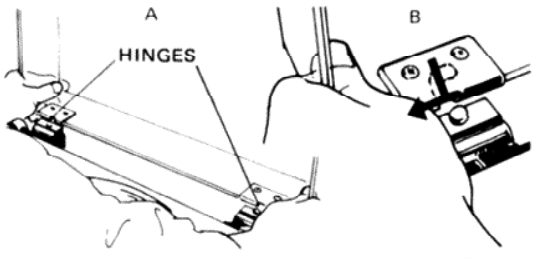
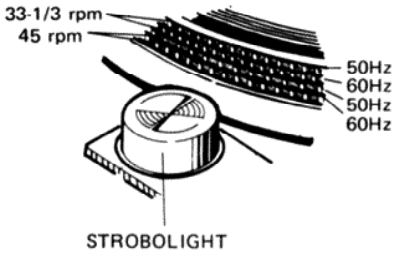


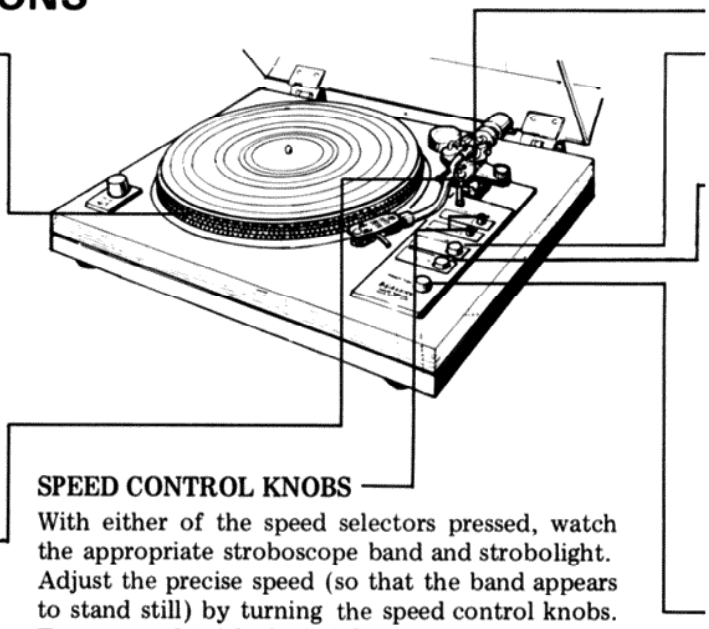
Fig. 17

PARTS AND THEIR FUNCTIONS

STROBOSCOPE

The proper part of the stroboscope band to read illuminated by the strobolight depends upon the frequency of the power sources and record speeds as below.



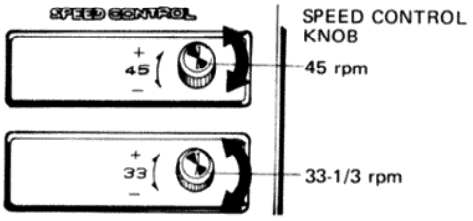


ARM REST

The tonearm should be on the arm rest whenever the turntable is not in use. If the unit is to be moved or transported, first secure the tonearm to the arm rest with the built-in clamp.

SPEED CONTROL KNOBS

With either of the speed selectors pressed, watch the appropriate stroboscope band and strobolight. Adjust the precise speed (so that the band appears to stand still) by turning the speed control knobs. Turn toward + (clockwise) for faster speed, toward — (counterclockwise) for slower. When the stroboscope appears to stand still, the speed is correct.



OPERATION

The operation is very simple about playing records on the PL-71 once you are accustomed to the operation.

Simply follow these steps:

1. Place a record on the platter.
2. Remove the stylus protector from the cartridge and free the tonearm from the rest clamp.
3. Push the 33-1/3 RPM BUTTON or 45 RPM BUTTON. This operation will simultaneously cause the turntable platter to rotate.
4. Watch the proper stroboscope band running illuminated by the strobolight. Adjust the speed with the speed control as explained above.
5. When the proper stroboscope appears to stand still, move the tonearm so that the stylus is directly in the starting point of the record.
6. Move the ARM ELEVATOR down. The tonearm will be gently lowered onto the record, then the performance will begin.
7. If you wish to start playing in the middle, simply move the ARM ELEVATOR upward.
8. After the record has been played, move the ARM ELEVATOR up and return the tonearm to the arm rest.
9. When the performance is over, the POWER OFF switch must be pushed immediately.

HOW TO USE THE ARM ELEVATOR

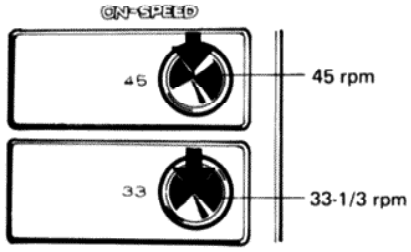
The arm elevator is particularly convenient when you wish to choose your favorite music or songs from the several songs recorded on the same side of an LP record.

45 RPM BUTTON

Push this button for playing a 45 rpm speed record. Simultaneously the power will be turned on.

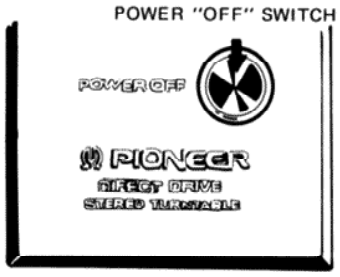
33-1/3 RPM BUTTON

Push this button for playing a 33-1/3 rpm speed record.
Simultaneously the power will be turned on.



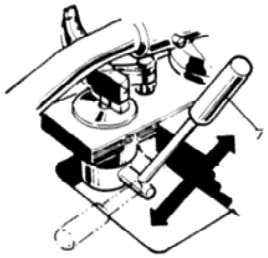
POWER "OFF" SWITCH

Push this button for turning off.



ARM ELEVATOR

This is a lever for controlling the up-and-down movement of the tonearm.
Setting the ARM ELEVATOR up, the arm head will be floated from the surface of the record. Setting the ARM ELEVATOR down, the arm head will be quietly descended on the surface of the record.
This is a convenient device for cueing in any portion of the record without fear of scratching the record surface.



Always turn the power on after placing the turntable platter on the center shaft.

STEREO AMPLIFIER CONNECTIONS

1. The connection cords of the PL-71 are marked L and R; connect them to the stereo amplifier left and right PHONO MAG terminals (Fig. 18).
2. The cord provided with spare lugs is the ground wire. Firmly connect it to the GND or E terminal of the amplifier.

NOTES:

1. *When employing a low level moving coil (MC) type cartridge, use a step-up transformer or a stereo amplifier equipped with an input terminal for a moving coil cartridge.*
2. *When a non-standard cartridge is to be used, make amplifier connections according to instructions which come with the cartridge.*

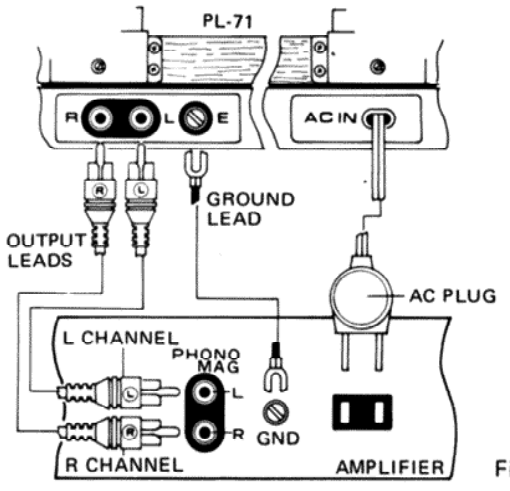


Fig. 18

PRECAUTIONS

NO VIBRATION

The tracking force of your stylus will probably be extremely light, so it is important to place the unit in a location protected from vibrations. This is another reason why it should not be too close to the speakers.

DO NOT OPEN THE SET OR TOUCH THE INSIDE PARTS

Your PL-71 is assembled with a number of small and delicate components into one precision mechanism which should not be touched. There is no reason to open the unit or remove the turntable once assembly is complete.

NO LUBRICATION

There is no use to lubricate this model because of the use of oilless bearings in the rotating parts.

ALWAYS CLEAN THE STYLUS

- If the stylus is dirty, sound quality will deteriorate. Brush it off with a soft brush from time to time.
- If the record surface is dirty, clean it with a record cleaner before playing.
- It is preferable to make it a habit to clean a record surface before each play.
- Touching the stylus with a finger is a common cause of stylus damage, so be very careful when handling the tonearm and when cleaning it.

CHOOSE A LEVEL LOCATION

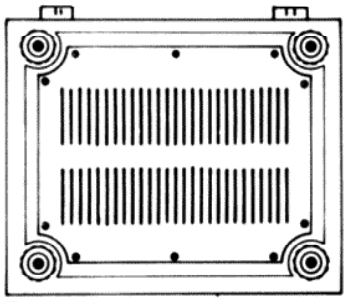
If the unit is not level various performance problems will occur, so play careful attention to this point.

LINE VOLTAGE

Be careful of line voltage. Your PL-71 is possible to operate on five kinds of voltage. The turntable is, of cource, factory-adjusted for the local line voltage of the country to which it is being shipped. If you use the unit in the different country or area from where you bought it, please confirm if the local line voltage is the same as at place you bought it.

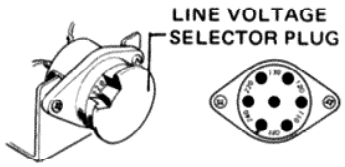
The line voltage of the unit can be adjusted by the LINE VOLTAGE SELECTOR PLUG that provided inside the wooden base. You can regulate the line voltage for operation by yourself as follows:

1. Unscrew a total of 10 bottom plate-held screws as shown in Fig. 19.
2. Remove the bottom plate, and you can find the LINE VOLTAGE SELECTOR PLUG.
3. The cut-off of the selector plug shows the voltage which operate the unit. (Perhaps, it ought to be different from your local line voltage.)
4. Pull out the selector plug, and put it back as indicated in cut-off your house voltage 110V, 120V, 130V, 220V or 240V. (Fig. 20).



To remove bottom plate, unscrew a total of 10 screws.

Fig. 19



Insert selector plug so that correct voltage figure is visible in cut-off.

Fig. 20

TROUBLESHOOTING

HUM

"HUM" is a low-pitch droning noise, often 60 or 50Hz, resulting from a loose connection of the ground lead. If hum occurs:

- Check the connection of the PL-71 running near the power transformer of your amplifier. Changing the connection of the PL-71 in relation to the amplifier will often eliminate hum.
- Check the connection of the PL-71 ground lead (the black lead with a split lug) to your amplifier. If it is loose, connect firmly.
- Reversing of the AC cord may occasionally eliminate hum.

HOWLING

"HOWLING" is acoustical feedback from speakers to the turntable unit. Increasing the distance between the speakers and the turntable, or even better, laying a soft cushion under the turntable will eliminate howling.

SPECIFICATIONS

Phono Motor and Turntable

Motor ..... Brushless DC servo Direct-drive motor
Speed ..... Two speeds: 33-1/3, 45rpm
Wow and Flutter ..... 0.05% (WRMS) or less
S/N ..... 60dB or more (in case of using Pioneer cartridge model PC-50)
Turntable platter ..... 31cm diam. Aluminum alloy

Tonearm

Tonearm type ..... Static balance, S-shape, pipe arm
Effective arm length 224mm
Overhang 14.5mm
Usable cartridge weight ..... 4g (MIN) to 32g (MAX)

Subfunctions

Anti-skating force control
Lateral balancer
Hinges (Free-adjustable)
Large-size shock absorbers
Arm elevator
Height-adjustable arm rest
Speed fine adjusters (33-1/3rpm, 45 rpm: for use in turntable speed adjustment with stroboscope and strobolight)

Others

Power requirements ..... AC 110, 120, 130, 220 and 240V, 60 or 50Hz
Power consumption ..... 5.2W (MAX)
Outer dimensions ..... 480 (W) x 410(D) x 185(H) mm
18-7/8 (W) x16-1/8(D) x 7-1/4(H) in.
Weight ..... 11.0kg, 24 lb 3oz

Accessory Group

45rpm adaptor (with overhang gauge) 1
Screwdriver 1
Output cord (Connection cord) 1
Weight plate (Cartridge weight-adjustable) 1
Cartridge mounting screws 10
Cartridge mounting washers 2
Cartridge mounting nuts 2
Operating instructions 2

NOTE:
Specifications and the design subject to possible modification without notice due to improvements.

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